

**ABSTRACT**

Motors with high power densities and ignition pressures, for example diesel motors, require crankshafts with combined gear wheels, which can withstand high stresses, especially in their connection areas. As a consequence, forged steel crankshafts, to which tempered gear wheels are fixed by means of screws or welding, are usually employed. The aim of the invention is to provide a method comprising fewer method steps for producing a crankshaft with a combined gear wheel and to provide a crankshaft that has been produced according to said method. To achieve this, the crankshaft comprising the combined gear wheel is cast in one piece. Tempered ductile iron is used as the starting material. The strength and wear resistance is increased locally by peening, or by the application of coatings containing carbide.